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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,326	12/03/2003	Richard J. Arhart	AD6939 USNA	7998

23906 7590 07/28/2005

E I DU PONT DE NEMOURS AND COMPANY
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4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

DIAMOND, ALAN D

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,326

Applicant(s)

ARHART, RICHARD J.

Examiner

Alan Diamond

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05202004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Suggested Claim Language

1. It is requested that the parenthesis be removed from the word "solar" at line 1 of claim 1.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gonsiorawski (U.S. Patent 6,660,930).

Gonsiorawski teaches a multilayer solar cell module (see Figures 1 and 2) comprising a backing layer (14) film, wherein the backing layer (14) is the ionomer/nylon blend SURLYN REFLECTIONS SG 201UC NC010 available from E.I. DuPont de

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Nemeurs Company as a film and having the physical properties seen in Tables 1 and 2 at col. 6 (see also col. 4, line 67 through col. 5, line 45). It is the Examiner's position that said SURLYN REFLECTIONS SG 201UC NC010 is a blend of an ethylene/acid copolymer ionomer dispersed in a continuous or co-continuous polyamide phase in view of the fact that SURLYN REFLECTIONS SG 201UC NC010 is the same material used by applicant (see page 5, line 27, of the instant specification). Since Gonsiorawski teaches the limitations of the instant claim, the reference is deemed to be anticipatory.

In addition, the instant blend of an ethylene/acid copolymer ionomer dispersed in a continuous or co-continuous polyamide phase would obviously have been present once Gonsiorawski's multilayer solar cell module having backing layer (14) made from ionomer/nylon blend SURLYN REFLECTIONS SG 201UC NC010 is provided. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sakai et al (JP 2001-119056 A).

Sakai et al prepares a multilayer solar cell module by fixing its sealing material on the upper and lower sides of a solar battery element (see paragraphs 0001, 0009, 0010, and 0041). The sealing material is an ethylene/acid copolymer, i.e., instant ionomer blended with polyamide oligomer, e.g., nylon 4, nylon 6, nylon 12, etc (see paragraphs 0009 to 0015, 0021, and 0028). It is the Examiner's position that the ionomer/polyamide oligomer blend prepared in Sakai et al's Table 2 has said ionomer dispersed in a continuous or co-continuous polyamide phase. Since said sealing

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material is on the lower side of the solar battery element it is a "backing" as here claimed. Since Sakai et al teaches the limitations of the instant claim, the reference is deemed to be anticipatory.

In addition, instant blend of an ethylene/acid copolymer ionomer dispersed in a continuous or co-continuous polyamide phase would obviously have been present once Sakai et al's multilayer solar cell module having the ionomer/polyamide blend in Sakai et al's Table 2 is provided. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

Claim Rejections - 35 USC § 103

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gonsiorawski (U.S. Patent 6,660,930) in view of Murch (U.S. Patent 3,845,163) and Roulin et al (U.S. Patent 5,522,506).

Gonsiorawski teaches a multilayer solar cell module (see Figures 1 and 2) comprising a backing layer (14) film, wherein the backing layer (14) is the ionomer/nylon blend SURLYN REFLECTIONS SG 201UC NC010 available from E.I. DuPont de Nemours Company as a film and having the physical properties seen in Tables 1 and 2 at col. 6 (see also col. 4, line 67 through col. 5, line 45). It is the Examiner's position that said SURLYN REFLECTIONS SG 201UC NC010 is a blend of an ethylene/acid copolymer ionomer dispersed in a continuous or co-continuous polyamide phase in view of the fact that SURLYN REFLECTIONS SG 201UC NC010 is the same material used

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by applicant (see page 5, line 27, of the instant specification). Gonsiorawski teaches the limitations of the instant claim other than the difference which is discussed below.

Gonsiorawski does not specifically teach that its ionomer/nylon film (14) is made by making a blown film or an extrusion cast film. Murch is relied upon for showing that blends of polyamides, i.e., nylon, with ionic copolymer, i.e., ionomer, are thermoplastic and can be made into a wide range of useful articles by conventional molding methods employed in the fabrication of thermoplastic articles, i.e., molded parts, extruded shapes, tubing, films, sheets, laminates, etc (see col. 1, line 22 through col. 3, line 45). Roulin et al teaches the conventional methods for forming a thermoplastic film include cast-extrusion and blow-extrusion (see col. 3, lines 53-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have prepared the ionomer/nylon film (14) of Gonsiorawski by making a blown film or an extrusion cast film because Murch teaches that blends of polyamides, i.e., nylon, with ionic copolymer, i.e., ionomer, are thermoplastic and can be made into a wide range of useful articles by conventional molding methods employed in the fabrication of thermoplastic articles, i.e., molded parts, extruded shapes, tubing, films, sheets, laminates, etc; and because conventional methods for forming a thermoplastic film include cast-extrusion and blow-extrusion, as shown by Roulin et al.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murch (U.S. Patent 3,845,163) in view of Roulin et al (U.S. Patent 5,522,506).

Murch teaches that blends of polyamides, i.e., nylon, with ionic copolymer, i.e., ionomer, are thermoplastic and can be made into a wide range of useful articles by

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conventional molding methods employed in the fabrication of thermoplastic articles, i.e., molded parts, extruded shapes, tubing, films, sheets, laminates, etc (see col. 1, line 22 through col. 3, line 45). It is the Examiner's position that the blends prepared in Murch's Examples 1-6 at cols. 3-4 have ethylene/acid copolymer ionomer dispersed in a continuous or co-continuous polyamide (nylon) phase. Said film made from Murch's blend encompasses the instant "backing". The recitation "for preparing a backing for a solar cell" recited at lines 1-2 of claim 2 is merely intended use and is not deemed to be a positive limitation of the claim. Murch's film, placed on any other material, becomes the backing for that material. Murch teaches the limitations of the instant claim other than the difference which is discussed below.

Murch does not specifically teach that its ionomer/nylon film is made by making a blown film or an extrusion cast film. However, as noted in the preceding paragraph, Murch teaches that its ionomer/nylon film is thermoplastic and can be made into a film by conventional molding methods for thermoplastics (see also col. 2, lines 57-63 of Murch). Roulin et al teaches the conventional methods for forming a thermoplastic film include cast-extrusion and blow-extrusion (see col. 3, lines 53-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have prepared the ionomer/nylon film of Murch by making a blown film or an extrusion cast film because Murch teaches that its ionomer/nylon film is thermoplastic and can be made into a film by conventional molding methods for thermoplastics; and because conventional methods for forming a thermoplastic film include cast-extrusion and blow-extrusion, as shown by Roulin et al.

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8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al (JP 2001-119056 A) in view of Murch (U.S. Patent 3,845,163) and Roulin et al (U.S. Patent 5,522,506).

Sakai et al prepares a multilayer solar cell module by fixing its sealing material on the upper and lower sides of a solar battery element (see paragraphs 0001, 0009, 0010, and 0041). The sealing material is an ethylene/acid copolymer, i.e., instant ionomer blended with polyamide oligomer, e.g., nylon 4, nylon 6, nylon 12, etc (see paragraphs 0009 to 0015, 0021, and 0028). It is the Examiner's position that the ionomer/polyamide oligomer blend prepared in Sakai et al's Table 2 has said ionomer dispersed in a continuous or co-continuous polyamide phase. Since said sealing material is on the lower side of the solar battery element it is a "backing" as here claimed. The sealing material is placed as a sheet, i.e., as a film (see paragraphs 0041 and 0046). Sakai et al teaches the limitations of the instant claim other than the difference which is discussed below.

Sakai et al does not specifically teach that its ionomer/polyamide (nylon) film is made by making a blown film or an extrusion cast film. Murch is relied upon for showing that blends of polyamides, i.e., nylon, with ionic copolymer, i.e., ionomer, are thermoplastic and can be made into a wide range of useful articles by conventional molding methods employed in the fabrication of thermoplastic articles, i.e., molded parts, extruded shapes, tubing, films, sheets, laminates, etc (see col. 1, line 22 through col. 3, line 45). Roulin et al teaches the conventional methods for forming a thermoplastic film include cast-extrusion and blow-extrusion (see col. 3, lines 53-60). It

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would have been obvious to one of ordinary skill in the art at the time the invention was made to have prepared the ionomer/nylon film of Sakai et al by making a blown film or an extrusion cast film because Murch teaches that blends of polyamides, i.e., nylon, with ionic copolymer, i.e., ionomer, are thermoplastic and can be made into a wide range of useful articles by conventional molding methods employed in the fabrication of thermoplastic articles, i.e., molded parts, extruded shapes, tubing, films, sheets, laminates, etc; and because conventional methods for forming a thermoplastic film include cast-extrusion and blow-extrusion, as shown by Roulin et al.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,114,046, US 6,319,596, US 2003/0000568, and US 2004/0035460 are hereby made of record.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond
Primary Examiner
Art Unit 1753

Alan Diamond
July 15, 2005

A handwritten signature in black ink, appearing to read 'Alan Diamond', with a long horizontal flourish extending to the right.